

REMARKS

At the outset, the Examiner is thanked for the thorough review and consideration of the pending application. The Office Action dated September 29, 2010 has been received and its contents carefully reviewed.

Claims 3 and 24 are canceled. Claims 1, 4 and 7 are amended. Amended claim 1 is supported by the present specification and figures. Amended claims 4 and 7 reflect minor informalities. Thus, no new matter is added. Accordingly, claims 1, 4, 7, 11, 12, 15-22, and 23 are currently pending. Claims 15-22 of the pending claims are withdrawn.

Reexamination and reconsideration of the pending claims is respectfully requested.

Rejection under 35 U.S.C. §103(a)

Claims 1, 3-4, 7, 11-12, and 23-24 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,331,384 to Satoi (hereinafter "384") and U.S. Patent No. 6,176,667 to Fairbairn et al. (hereinafter "667").

The rejection of claims 1, 4, 7, 11, 12 and 23 is respectfully traversed and reconsideration is requested.

The Claimed Invention and its Advantages

Claims 1, 4, 7, 11, 12 and 23 are allowable over the cited references individually or in combination in that independent claim 1 recites a combination of elements including, for example, "a lower portion and an upper portion of the device usable for forming the alignment layer", "wherein the lower portion includes a printing part including a printing process to form an alignment layer on a substrate, and including a print table fixing the substrate and at least one inkjet head to spray an alignment material onto the substrate", "wherein the upper portion includes a drying part positioned directly and vertically above the printing part, the drying part including a drying process to dry a solvent of the alignment material onto the substrate using a dry table having a hot plate, a baking process to bake the dried alignment material onto the substrate, and a rubbing process", "a transferring part having a transfer robot lifting the substrate

in vertical direction, for transferring the substrate from the printing part to the drying part and placing the substrate on the dry table after printing process", and "wherein at least an array of the inkjet head is arranged in at least one line according to a long side or a short side of the substrate".

In particular, the claimed invention discloses the printing part of the lower portion of the device includes a printing process to form the alignment layer on the substrate, and includes a printing table fixing the substrate and at least one inkjet head to spray an alignment material onto the substrate. Also, in the claimed invention, at least an array of the inkjet head is arranged in at least one line according to a long side or a short side of the substrate. The claimed invention further discloses the drying part of the upper portion of the device including a drying process to dry a solvent of the alignment material onto the substrate using a dry table having a hot plate, a baking process to bake the dried alignment material onto the substrate, and a rubbing process. The claimed invention further discloses the transferring part has a transfer robot lifting the substrate in vertical direction, for transferring the substrate from the printing part to the drying part and placing the substrate on the dry table after printing process.

Distinctions Between the Present Invention and the Cited Art

However, the cited references including 384' and 667', singly or in combination, fail to teach or suggest at least the above features of the claimed invention.

In contrast to amended claim 1 of the present invention, 384' does not disclose or suggest a heating apparatus 202 or a drying apparatus 208 including a rubbing process, and a robot lifting a substrate in vertical direction to transfer the substrate from a coating apparatus 201 or a coloring unit 205 to a heating apparatus 202 or a drying apparatus 208 after a coating or a coloring process. Thus, the claimed invention is patentably from 384'.

The deficiencies of 384' cannot be cured by 667' since 667' also fails to teach or suggest the claimed features. Specifically, in contrast to amended claim 1 of the present invention, 667' does not disclose or suggest a transferring part having a transfer robot lifting the substrate in vertical direction, for transferring the substrate from the printing part to the drying part and placing the substrate on the dry table after the printing process. Rather, 667' discloses "a

mechanism capable of moving at least two wafers together from the wafer storage mechanism and placing one of the wafers in each of the first and second wafer processing chambers.", as disclosed in claim 2 of '667. That is, the first wafer processing chamber A1 and the second wafer processing chamber A2 of '667 not only are independent from each other, but also have no relationship between them. Therefore, there is no necessity for the wafer transfer chamber 30 of '667' to transfer a substrate in a vertical direction.

As discussed above, the claimed invention is not obvious over the cited references '384 and '667 singly or in combination. Accordingly, Applicants respectfully submit that amended claim 1 and claims 4, 7, 11, 12 and 23 which depend either directly or indirectly upon claims 1, are allowable over the cited references. In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance.

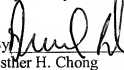
Accordingly, the Examiner is respectfully requested to pass this application to issue.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Kay Kyung-sook Chang, Registration No. 56,946 at the telephone number of the undersigned below to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Director is hereby authorized in this, concurrent, and future replies to charge any fees required during the pendency of the above-identified application or credit any overpayment to Deposit Account No. 02-2448.

Dated: December 29, 2010

Respectfully submitted,

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